

Species360 Physiological Reference Intervals for Captive Wildlife - 2013

Standard International Units. [Switch Units](#)

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Tiger (*Panthera tigris*)

Samples contributed by 109 institutions.

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Sample Selection Criteria:

- No selection by gender.
- All ages combined
- Animal was classified as healthy at the time of sample collection
- Sample was not deteriorated

Physiological Reference Intervals for Panthera tigris

Test	Units	Reference Interval	Mean	Median	Low Sample ^a	High Sample ^b	Sample Size ^c	Animals ^d
White Blood Cell Count	*10 ⁹ cells/L	5.62 - 18.66	10.67	10.17	1.70	24.90	2176	654
Red Blood Cell Count	*10 ¹² cells/L	4.50 - 8.95	6.88	6.92	2.16	11.80	2129	628
Hemoglobin	g/L	82 - 166	131	133	56	220	2175	635
Hematocrit	L/L	0.245 - 0.518	0.396	0.400	0.117	0.690	2590	682
MCV	fL	45.0 - 69.1	57.7	57.8	35.5	80.5	2067	612
MCH	pg	15.8 - 21.9	19.2	19.3	13.5	25.0	2018	604
MCHC	g/L	281 - 375	332	334	238	424	2116	622
Segmented Neutrophils	*10 ⁹ cells/L	3.52 - 14.47	8.01	7.67	0.03	20.30	2174	654

Neutrophilic Band Cells	*10⁹ cells/L	0.02 - 1.31	0.16	0.05	0.00	1.70	2024	646
Lymphocytes	*10⁹ cells/L	0.42 - 4.05	1.65	1.43	0.03	5.33	2142	649
Monocytes	*10⁶ cells/L	74 - 916	335	285	7	1242	1896	624
Eosinophils	*10⁶ cells/L	63 - 703	250	205	7	909	1705	598
Basophils	*10⁶ cells/L	6 - 251	92	87	2	321	267	190
Platelet Count	*10¹² cells/L	0.078 - 0.511	0.243	0.235	0.000	0.595	1037	374
Nucleated Red Blood Cells	/100 WBC	0 - 9	1	0	0	13	154	106
Reticulocytes	%	0.0 - 2.5	0.7	0.1	0.0	4.0	44	30
Test	Units	Reference Interval	Mean	Median	Low Sample^a	High Sample^b	Sample Size^c	Animals^d
Glucose	mmol/L	4.15 - 14.03	7.87	7.44	0.61	19.03	2489	663
Blood Urea Nitrogen	mmol/L	5.7 - 18.3	10.5	10.0	0.7	23.2	2464	662
Creatinine	μmol/L	55 - 370	222	225	0	566	2416	657
BUN/Cr ratio		5.4 - 30.6	12.8	11.3	0.9	36.8	2308	627
Uric Acid	μmol/L	0 - 60	18	12	0	95	414	182
Calcium	mmol/L	2.17 - 2.97	2.50	2.48	1.73	3.28	2390	650
Phosphorus	mmol/L	1.19 - 3.04	1.92	1.83	0.03	3.75	2205	628
Ca/Phos ratio		1.2 - 2.6	1.8	1.7	0.8	3.4	2180	624
Sodium	mmol/L	143 - 159	150	150	136	164	2236	627

Potassium	mmol/L	3.5 - 5.3	4.2	4.1	2.5	5.9	2240	630
Na/K ratio		26.8 - 43.1	36.1	36.4	21.7	48.8	2222	625
Chloride	mmol/L	110 - 128	119	119	102	137	2110	597
Total Protein	g/L	53 - 83	71	71	44	98	2079	614
Albumin	g/L	25 - 44	36	37	19	52	1962	600
Globulin	g/L	20 - 51	34	34	6	62	1968	603
Fibrinogen	g/L	*	2.18	2.00	0.00	8.00	35	16
Alkaline Phosphatase	U/L	6 - 84	27	23	0	98	1992	566
Lactate Dehydrogenase	U/L	37 - 717	237	202	1	950	958	302
Aspartate Aminotransferase	U/L	11 - 63	28	25	2	76	1996	602
Alanine Aminotransferase	U/L	18 - 159	67	59	0	196	1838	604
Creatine Kinase	U/L	63 - 636	240	201	2	817	1026	437
Gamma-glutamyltransferase	U/L	0 - 10	2	1	0	18	740	328
Amylase	U/L	182 - 2737	1001	865	1	4320	912	384
Lipase	U/L	0 - 55	14	9	0	91	437	217
Total Bilirubin	μmol/L	0.0 - 8.6	3.3	3.4	0.0	10.3	2099	627
Direct Bilirubin	μmol/L	0.0 - 1.7	0.6	0.0	0.0	1.7	334	175
Indirect Bilirubin	μmol/L	0.0 - 5.5	1.8	1.7	0.0	8.6	332	177
Cholesterol	mmol/L	3.59 - 10.25	6.39	6.16	1.81	13.65	2067	592

Triglyceride	mmol/L	0.14 - 0.96	0.41	0.36	0.06	1.16	1161	376
Bicarbonate	mmol/L	9.8 - 20.9	15.3	15.2	8.0	25.0	271	153
Magnesium	mmol/L	0.462 - 1.218	0.884	0.882	0.321	1.549	336	174
Iron	µmol/L	4.7 - 35.2	17.1	15.7	0.4	40.1	140	74
Carbon Dioxide	mmol/L	9.9 - 20.9	15.7	16.0	6.0	26.0	698	252
Thyroxine	nmol/L	7 - 55	23	18	4	58	159	98
Test	Units	Reference Interval	Mean	Median	Low Sample^a	High Sample^b	Sample Size^c	Animals^d
Body Temperature	C	36.9 - 41.1	38.8	38.7	34.6	42.7	1258	413

^a Lowest sample value used to calculate the reference interval.

^b Highest sample value used to calculate the reference interval.

^c Number of samples used to calculate the reference interval.

^d Number of different individuals contributing to the reference interval.

* Sample size is insufficient to produce a valid reference interval.

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